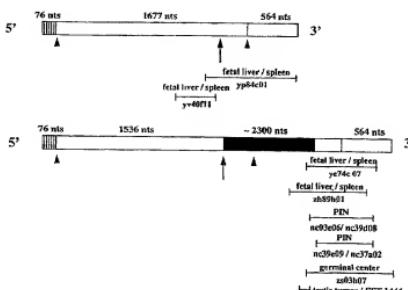




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C12N 15/12, C07K 14/47, 16/18, C12Q 1/68, G01N 33/53		A1	(11) International Publication Number: WO 00/05376
(21) International Application Number: PCT/US99/16831		(43) International Publication Date: 3 February 2000 (03.02.00)	
(22) International Filing Date: 23 July 1999 (23.07.99)			
(30) Priority Data: 60/094,137 24 July 1998 (24.07.98)		US	
(71) Applicant (for all designated States except US): THE GOVERNMENT OF THE UNITED STATES OF AMERICA, represented by THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES [US/US]; c/o National Institutes of Health, Office of Technology Transfer, Box OTT, Bethesda, MD 20892 (US).			(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TI, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TI, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(72) Inventors; and			
(75) Inventors/Applicants (for US only): CHUAQUI, Rodrigo, F, [CL/US]; Apartment 203, 10630 Montrose Avenue, Bethesda, MD 20814 (US). COLE, Kristina, A, [US/US]; 6011 Wilmett Road, Bethesda, MD 20817 (US). LIOTTA, Lance, A, [US/US]; 8601 Bradley Boulevard, Bethesda, MD 20817 (US).			
(74) Agents: SAMPLES, Kenneth, H. et al.; Fitch, Even, Tabin & Flannery, Suite 1600, 120 South LaSalle Street, Chicago, IL 60603-3406 (US).			
(54) Title: PB 39, A GENE DYSREGULATED IN PROSTATE CANCER, AND USES THEREOF			



## (57) Abstract

A novel gene, PB39, that is up-regulated, or over-expressed, in prostate cancer has been identified. The gene has been identified by means of its cDNA obtained by reverse transcription of the corresponding mRNA. Microdissection of prostate glands that had been surgically removed from prostate cancer patients revealed a novel up-regulated transcript in an aggressive prostate carcinoma. Differential analysis for the presence of this gene was carried out from the same glands by comparing transcription in microdissected normal prostatic epithelium versus that in microdissected invasive tumor. The transcript was over-expressed in 5 of 10 prostate carcinomas examined. A variant transcript was over-expressed in 4 of 4 prostate carcinomas, and was found in 1 of 4 normal samples. The invention provides a purified and isolated nucleic acid that includes the sequence of PB39 or its complement, the sequence of a variant of PB39 or its complement, and a primer or probe, that includes a sequence that is a fragment of these sequences. Additionally, the polypeptide encoded by these genes, an antibody to the polypeptide, and methods of detection of PB39 or its gene product are provided.